Applicant: Friedrich BOECKING

Docket No. R.306610

Preliminary Amdt.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

Claims 1-10. (Canceled)

11. (New) In a fuel injector for a common rail injection system for injecting fuel into a

combustion chamber of an internal combustion engine, the injector having an injector body,

a nozzle body, an injection valve member embodied in multiple parts is received in the nozzle

body, a piezoelectric actuator, a hydraulic booster assembly connected downstream of the

piezoelectric actuator, and control chambers associated with the multi-part injection valve

member for actuating the valve member, the improvement wherein the hydraulic booster

assembly actuated by the piezoelectric actuator comprises first and second booster chambers

which are each directly connected hydraulically with separate control chambers that actuate

the needle parts of the injection valve member.

12. (New) The fuel injector as recited in claim 11, wherein the first booster chamber

communicates with a second control chamber for the outer needle part via a conduit, and the

second booster chamber communicates with a first control chamber for the inner needle part.

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13. (New) The fuel injector as recited in claim 11, further comprising a pressure chamber

embodied between the needle parts guided one inside the other, of the multi-part injection

valve member, which pressure chamber can be filled from a nozzle chamber surrounding the

multi-part injection valve member.

14. (New) The fuel injector as recited in claim 11, further comprising a first and a second

pressure step on the outer needle part and acting in the opening direction.

15. (New) The fuel injector as recited in claim 13, further comprising a first and a second

pressure step on the outer needle part and acting in the opening direction, the second pressure

step being embodied in said pressure chamber.

16. (New) The fuel injector as recited in claim 11, further comprising a pressure step

embodied on the inner needle part, on the end thereof toward the combustion chamber, the

hydraulic area of said pressure step on the inner needle part being operative in the opening

direction of the inner needle part being less than the hydraulically operative areas of the first

and second pressure steps of the outer needle part.

17. (New) The fuel injector as recited in claim 11, wherein the hydraulically operative areas,

in the opening direction, of the pressure steps of the outer needle part exceed the hydraulically

operative area on the end toward the combustion chamber of the inner needle part.

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18. (New) The fuel injector as recited in claim 11, further comprising a first seat formed on

the outer needle part and a second seat formed on the inner needle part, which seats cooperate

with a wall of the nozzle body.

19. (New) The fuel injector as recited in claim 11, wherein the piezoelectric actuator is

integrated with the fuel inlet.

20. (New) The fuel injector as recited in claim 11, further comprising first injection

openings that can be opened or closed by the first seat and second injection openings that can

be opened or closed by the second seat, said first and second injection openings being

embodied on the nozzle body and opening in the direction of the combustion chamber.